

What is claimed is:

1. A particle, transportable in a fluid stream, comprising:

a membrane enclosing a particle core, the membrane including a plurality of functional elements, integrated in a matrix, which, in dependence on the concentration of a body substance, bring about at least one of substance transport through, and substance accumulation at, the membrane, wherein a detector element is provided as a functional element, and wherein the at least one of substance accumulation at, and the substance passage through, the membrane is influenceable by an extracorporeal signal provided for actuating the detector element.

2. The particle as claimed in claim 1, wherein the particle is transportable in at least one of a human and animal bloodstream.

3. The particle as claimed in claim 1, wherein the membrane accumulates an endogenous substance.

4. The particle as claimed in claim 1, wherein release of a drug through the membrane depends on the concentration of the body substance.

5. The particle as claimed in claim 1, wherein the membrane is attackable by enzymes in the body.

6. The particle as claimed in claim 1, wherein the particle core includes a reaction region, intended for substance transformation.

7. The particle as claimed in claim 6, wherein the reaction region is intended for transforming an endogenous intermediate.

8. The particle as claimed in claim 1, wherein the external diameter is at least 50 nm and at most 10 μm .

9. The particle as claimed in claim 1, wherein the thickness of the membrane is at least 2 nm and at most 1 μm .

10. The particle as claimed in claim 1, wherein the extracorporeal signal is an ultrasonic signal.

11. The particle as claimed in claim 10, wherein the extracorporeal signal is an electromagnetic signal.

12. The particle as claimed in claim 1, wherein a portal element, which enables substance transport to take place through the matrix, is provided as a functional element.

13. The particle as claimed in claim 12, wherein the detector element is functionally coupled to the portal element.

14. The particle as claimed in claim 1, wherein the matrix is formed from a polymer layer.

15. A method for detecting a particle as claimed in claim 1, comprising:

detecting the change in the particle, brought about by at least one of the substance transport through, and the substance accumulation at, the membrane, in an imaging medicoinstrumental method.

16. The particle as claimed in claim 2, wherein the membrane accumulates an endogenous substance.

17. The particle as claimed in claim 2, wherein release of a drug through the membrane depends on the concentration of the body substance.

18. The particle as claimed in claim 2, wherein the membrane is attackable by enzymes in the body.

19. The particle as claimed in claim 2, wherein the particle core includes a reaction region, intended for substance transformation.

20. The particle as claimed in claim 3, wherein release of a drug through the membrane depends on the concentration of the body substance.

21. The particle as claimed in claim 3, wherein the membrane is attackable by enzymes in the body.

22. The particle as claimed in claim 3, wherein the particle core includes a reaction region, intended for substance transformation.

23. The particle as claimed in claim 19, wherein the reaction region is intended for transforming an endogenous intermediate.

24. The particle as claimed in claim 2, wherein the external diameter is at least 50 nm and at most 10 μm .

25. The particle as claimed in claim 2, wherein the thickness of the membrane is at least 2 nm and at most 1 μm .

26. The particle as claimed in claim 2, wherein the extracorporeal signal is an ultrasonic signal.

27. The particle as claimed in claim 2, wherein the matrix is formed from a polymer layer.

28. The particle as claimed in claim 1, wherein the fluid stream is a bloodstream.